

CHAPTER 2

Construction Site Erosion Control (Ord. 92-38) (Ord. 2006-07)

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CONTROL OF CONSTRUCTION SITE EROSION (Ord. 92-38) (Ord. 94-10)

Forward. The intent of this ordinance is to require erosion control practices that will reduce the amount of sediment, dust and other pollutants leaving construction site during land development or land disturbance activities. This ordinance applies to all land disturbing construction activities.

SEC. 15-2-1 AUTHORITY.

- (a) This ordinance is adopted under the authority granted by Sec. 62.2345, Wis. Stats.
- (b) **State Code Adopted.** The administrative code provisions describing and defining regulations with respect to one- and two-family dwellings in s. Comm. 21.125 of the current Wisconsin Administrative Code are hereby adopted and by reference made a part of this Chapter as if fully set forth herein. Any act required to be performed or prohibited by an administrative code provision incorporated herein by reference is required or prohibited by this Chapter. Any future amendments, revisions or modifications of the administrative code provisions incorporated herein are intended to be made a part of this Chapter to secure uniform statewide regulation of one- and two-family dwellings in this City. A copy of these administrative code provisions and any future amendments shall be kept on file in the Building Inspector's office.

SEC. 15-2-2 FINDINGS AND PURPOSE.

- (a) **Findings.** The City of Cedarburg Common Council finds the runoff and dust from construction sites carries a significant amount of sediment and other pollutants to the waters and properties of the State and this City.
- (b) **Purpose.** It is the purpose of this ordinance to preserve the natural resources; to protect the quality of the waters of the State and the City; and to protect and promote the health, safety and welfare of the people, to the extent practicable by minimizing the amount of sediment, dust and other pollutants carried by runoff or discharged from construction sites to lakes, streams, wetlands or adjoining properties.

SEC. 15-2-3 APPLICABILITY OF ORDINANCE.

This ordinance applies to land disturbing and land developing activities on land within the boundaries and jurisdiction of the City and, optionally, the public and private lands subject to extraterritorial review under Ch. 236, Stats. All state funded or conducted construction is exempt from this ordinance.

- (a) This ordinance does not apply to the following:
 - (1) A construction project that is exempted by federal statutes or regulations from the requirement to have a national pollutant discharge elimination system permit issued under chapter 40, Code of Federal Regulations, part 122, for land disturbing construction activity.
 - (2) Nonpoint discharges from agricultural facilities and practices.
 - (3) Nonpoint discharges from silviculture activities.
 - (4) Routine maintenance for project sites under 5 acres of land disturbance if performed to maintain the original line and grade, hydraulic capacity or original purpose of the facility.
- (b) **Exclusions.**

This ordinance is not applicable to activities conducted by a state agency, as defined under s. 227.01 (1), Wis. Stats., but also including the office of district attorney, which is subject to the state plan promulgated or a memorandum of understanding entered into under s. 281.33 (2), Wis. Stats.

SEC. 15-2-4 DEFINITIONS.

- (a) **Agricultural Land Use.** Use of land for planting, growing, cultivating or harvesting of crops for human or livestock consumption and pasturing or yarding of livestock.
- (b) **Average Annual Rainfall.** A calendar year of precipitation, excluding snow, which is considered typical.
- (c) **Best Management Practice (BMP).** Structural or non-structural measures, practices, techniques or devices employed to avoid or minimize soil, sediment or pollutants carried in runoff to waters of the state.
- (d) **City Inspector.** City Engineer, City Inspector or their inspector designees.
- (e) **Commercial Land Use.** Use of land for the retail or wholesale sale of goods or services.
- (f) **Construction Site.** An area upon which one or more land disturbing construction activities occur, including areas that are part of a larger common plan of development or sale where multiple separate and distinct land disturbing construction activities may be taking place at different times on different schedules but under one plan.
- (g) **Construction Site Control Measure.** A control measure used to meet the requirements of Sec. 15-2-7(b).
- (h) **Control Measure.** A practice or combination of practices to control erosion and attendant pollution.

- (i) **Control Plan.** A written description of the number, locations, sizes and other pertinent information of control measures designed to meet the requirements of this ordinance submitted by the applicant for review and approval by the City Inspector.
- (j) **Erosion.** Detachment and movement of soil, sediment or rock fragments by water, wind, ice or gravity.
- (k) **Final Stabilization.** All land disturbing construction activities at the construction site have been completed and that a uniform perennial vegetative cover has been established, with a density of at least 70 percent of the cover, for the unpaved areas and areas not covered by permanent structures, or that employ equivalent permanent stabilization measures.
- (l) **Land Developing Activity.** The construction of buildings, roads, parking lots, paved storage areas and similar facilities.
- (m) **Land Disturbing Construction Activity.** Any man-made change of the land surface including removing vegetation cover, excavating, filling and grading but not including agricultural land uses such as planting, growing, cultivating and harvesting of crops; growing and tending of gardens; harvesting of trees; and landscaping modifications.
- (n) **Landowner.** Any person holding title to or having an interest in land.
- (o) **Land User.** Any person operating, leasing, renting, or having made other arrangements with the landowner by which the landowner authorizes use of his or her land.
- (p) **Maximum Extent Practicable (MEP).** A level of implementing best management practices in order to achieve a performance standard specified in this chapter which takes into account the best available technology, cost effectiveness and other competing issues such as human safety and welfare, endangered and threatened resources, historic properties and geographic features. MEP allows flexibility in the way to meet the performance standards and may vary based on the performance standard and site conditions.
- (q) **Performance Standard.** A narrative or measurable number specifying the minimum acceptable outcome for a facility or practice.
- (r) **Runoff.** The rainfall, snow melt, or irrigation water flowing over the ground surface.
- (s) **Sediment.** Settleable solid material that is transported by runoff, suspended within runoff or deposited by runoff away from its original location.
- (t) **Separate Storm Sewer.** A conveyance or system of conveyances including roads with drainage systems, streets, catch basins, curbs, gutters, ditches, constructed channels or storm drains, which meets all of the following criteria:
 - (1) Is designed or used for collecting water or conveying runoff.
 - (2) Is not part of a combined sewer system.
 - (3) Is not draining to a storm water treatment device or system.
 - (4) Discharges directly or indirectly to waters of the state.
- (u) **Set of 1 Year Design Storms.** The following rain intensities and rain volumes or corresponding values specific to the community for the storm durations of 05, 1, 2, 3, 6, 12 and 24 hours that occur approximately one per year.
- (v) **Site.** The entire area included in the legal description of the land on which the land disturbing or land development activity is proposed in the permit application.
- (w) **Technical Standard.** A document that specifies design, predicted performance and operation and maintenance specifications for a material, device or method.

- (x) **Waters of the State.** The meaning given in s. 281.01 (18), Wis. Stats.

AVERAGE

Storm Duration (Hours)	Rain Intensity (Inches/Hour)	Total Rain (Inches)
0.5	1.8	0.9
1	1.1	1.1
2	0.7	1.3
3	0.5	1.5
6	0.3	1.7
12	0.2	2.0
24	0.1	2.3

SEC. 15-2-5 DESIGN CRITERIA, STANDARDS AND SPECIFICATIONS FOR CONTROL MEASURES.

All control measures required to comply with this Chapter shall meet the design criteria, standards and specifications for the control measures based on accepted design criteria, standards and specifications identified by the City Inspector.

- (a) **Incorporation of Guidelines.** The provisions of the *Wisconsin Construction Site Best Management Practices Handbook*, as amended from time to time, as published by the Wisconsin Department of Natural Resources, and the Department approved Technical Standards, are hereby incorporated herein by this reference and whenever the provisions of such publications, as amended and the other sections of this ordinance may conflict, the provisions of such publication shall control.

Department approved Technical Standards shall take precedence over the *Wisconsin Construction Site Best Management Practices Handbook*. The Technical standards are available at <http://dnr.wi.gov/org/water/wm/nps/stormwater/techstds.htm#Post>.

- (b) **Performance Standards.**

- (1) Responsible Party. The responsible party shall implement an erosion and sediment control plan, developed in accordance with Sec. 15-2-8, that incorporates the requirements of this section.
- (2) Plan. A written plan shall be developed in accordance with Sec. 15-2-8 and implemented for each construction site.
- (3) Erosion and Other Pollutant Control Requirements. The plan required under sub. (2) shall include the following:
 - a. BMPs that, by design, achieve to the maximum extent practicable, a reduction of 80% of the sediment load carried in runoff, on an average annual basis, as compared with no sediment or erosion controls until the construction site had undergone final stabilization. No person shall be required to exceed an 80% sediment control reduction to meet the

requirements of this paragraph. Erosion and sediment control BMPs may be used alone or in combination to meet the requirements of this paragraph. Credit toward meeting the sediment reduction shall be given for limiting the duration or area, or both, of land disturbing construction activity, or other appropriate mechanism.

Soil loss prediction tools that estimate the sediment load leaving the construction site under varying land and management conditions, or methodology identified in subch. V. of ch. NR 151, Wis. Adm. Code, may be used to calculate sediment reduction.

- b. Notwithstanding par. a., if BMPs cannot be designed and implemented to reduce the sediment load by 80%, on an average annual basis, the plan shall include a written and site-specific explanation as to why the 80% reduction goal is not attainable and the sediment load shall be reduced to the maximum extent practicable.
 - c. Where appropriate, the plan shall include sediment controls to do all of the following to the maximum extent practicable:
 - 1. Prevent tracking of sediment from the construction site onto roads and other paved surfaces.
 - 2. Prevent the discharge of sediment as part of site de-watering.
 - 3. Protect the separate storm drain inlet structure from receiving sediment.
 - d. The use, storage and disposal of chemicals, cement and other compounds and materials used on the construction site shall be managed during the construction period, to prevent their entrance into waters of the state. However, projects that require the placement of these materials in waters of the state, such as constructing bridge footings or BMP installations, are not prohibited by this paragraph.
- (4) Location. The BMPs used to comply with this section shall be located prior to runoff entering waters of the state.
- (5) Alternate Requirements. The City of Cedarburg may establish storm water management requirements more stringent than those set forth in this section if the City of Cedarburg determines that an added level of protection is needed for sensitive resources.

SEC. 15-2-6 MAINTENANCE OF CONTROL MEASURES.

All sedimentation basins and other control measures necessary to meet the requirements of this ordinance shall be maintained by the applicant or subsequent landowner during the period of land disturbance and land development of the site in a satisfactory manner to ensure adequate performance and to prevent nuisance conditions.

SEC. 15-2-7 CONTROL OR EROSION AND POLLUTANTS DURING LAND DISTURBANCE AND DEVELOPMENT.

- (a) **Applicability.** This Section applies to the following sites of land development or land disturbing activities:
- (1) Those requiring a subdivision plat approval or the construction of houses or commercial, industrial or institutional buildings on lots of approved subdivision plats.
 - (2) Those requiring a certified survey approval or the construction of houses of commercial, industrial or institutional buildings on lots of approved certified surveys.
 - (3) Those involving grading, removal of protective ground cover or vegetation, excavation, land filling or other land disturbing activity affecting a surface area of four thousand (4,000) square feet or more.
 - (4) Those involving excavation or filling or a combination of excavation and filling affecting four hundred (400) cubic yards or more of dirt, sand or other excavation or fill material.
 - (5) Those involving street, highway, road or bridge construction, enlargement, relocation or reconstruction.
 - (6) Those involving the laying, repairing, replacing or enlarging of an underground pipe or facility for a distance of three hundred (300) feet or more.
- (b) **Erosion and Other Pollutant Control Requirements.** The following requirements shall be met on all sites described in Subsection (a).
- (1) 80% Reduction of Sediment Load. BMPs that, by design, achieve to the maximum extent practicable, a reduction of 80% of the sediment load carried in runoff, on an average annual basis, as compared with no sediment or erosion controls until the construction site has undergone final stabilization. No person shall be required to exceed an 80% sediment reduction to meet the requirements of this paragraph. Erosion and sediment control BMPs may be used alone or in combination to meet the requirements of this paragraph. Credit toward meeting the sediment reduction shall be given for limiting the duration or area, or both, of land disturbing construction activity, or other appropriate mechanism.
 - (2) Site Dewatering. Water pumped from the site shall be treated by temporary sedimentation basins, grit chambers, sand filters, up-flow chambers, hydrocyclones, swirl concentrators, or other appropriate controls designed and used to remove particles of one hundred (100) microns or greater for the highest dewatering pumping rate. If the water is demonstrated to have no particles greater than one hundred (100) microns during dewatering operations, then no control is needed before discharge, except as determined by the City Inspector. Water may not be discharged in a manner that causes erosion of the site or receiving channels.
 - (3) Waste and Material Disposal. All waste and unused building materials (including garbage, debris, cleaning wastes, wastewater, toxic materials, or hazardous materials) shall be properly disposed and not allowed to be carried by runoff into a receiving channel or storm sewer system.
 - (4) Tracking. Each site shall have graveled roads, access drives and parking areas of sufficient width and length to prevent sediment from being tracked onto public or

private roadways. Any sediment reaching a public or private road shall be removed by street cleaning (not flushing) before the end of each workday.

- (5) Drain Inlet Protection. All storm drain inlets shall be protected with a straw bale, filter fabric, or equivalent barrier meeting accepted design criteria, standards and specifications.
- (6) Site Erosion Control. The following criteria [(a) through (d)] apply only to land development or land disturbing activities that result in runoff leaving the site.
 - a. Channeled runoff from adjacent areas passing through the site shall be diverted around disturbed areas, if practical. Otherwise, the channel shall be protected as described below in Sec. 15-2-7(b)(5)(c). Sheet flow runoff from adjacent areas greater than ten thousand (10,000) square feet in area shall also be diverted around disturbed areas unless shown to have resultant runoff velocities of less than 0.5 ft/sec across the disturbed area for the set of one (1) year design storms. Diverted runoff shall be conveyed in a manner that will not erode the conveyance and receiving channels.
 - b. All activities on the site shall be conducted in a logical sequence to minimize the area of bare soil exposed at any one time.
 - c. Runoff from the entire disturbed area on the site shall be controlled by meeting either subpar. 1 and 2 or 1 and 3.
 1. All disturbed ground left inactive for seven (7) or more days shall be stabilized by seeding or sodding (only available prior to September 15th) or by mulching or covering, or other equivalent control measure.
 2. For sites with more than ten (10) acres disturbed at one time, or if a channel originates in the disturbed area, one or more sedimentation basins shall be constructed. Each sedimentation basin shall have a surface area of at least one (1%) percent of the area draining to the basin and at least three (3) feet of depth and constructed in accordance with accepted design specifications. Sediment shall be removed to maintain a depth of three (3) feet. The basin shall be designed to trap sediment greater than fifteen (15) microns in size, based on the set of one (1) year design storms having durations from 0.5 to 24 hours. The basin discharge rate shall also be sufficiently low as to not cause erosion along the discharge channel or the receiving water.
 3. For sites with less than ten (10) acres disturbed at one time, filter fences, straw bales, or equivalent control measures shall be placed along all side slope and down slope sides of the site. If a channel or area of concentrated runoff passes through the site, filter fences shall be placed along the channel edges to reduce sediment reaching the channel.
 - d. Any soil or dirt storage piles containing more than ten (10) cubic yards of material should not be located with a downslope drainage length of less than

twenty-five (25) feet to a roadway or drainage channel. If remaining for more than seven (7) days, they shall be stabilized by mulching, vegetative cover, tarps or other means. Erosion from piles which will be in existence for less than seven (7) days shall be controlled by placing straw bales or filter fence barriers around the pile. In-street utility repair or construction soil or dirt storage piles located closer than twenty-five (25) feet of a roadway or drainage channel must be covered with tarps or suitable alternative control, if exposed for more than seven (7) days, and the storm drain inlets must be protected with straw bales or other appropriate filtering barriers.

SEC. 15-2-8 PERMIT APPLICATION, CONTROL PLAN, AND PERMIT ISSUANCE.

- (a) **Permit Application.** No landowner or land user may commence a land disturbance or land development activity subject to this ordinance without receiving prior approval of a control plan for the site and a permit from the City Inspector. At least one landowner or land user controlling or using the site and desiring to undertake a land disturbing or land developing activity subject to this ordinance shall submit an application for a permit and a control plan and pay an application fee as set forth in Section 15-1-101(a) to the City Inspector. By submitting an application, the applicant is authorizing the City Inspector to enter the site to obtain information required for a review of the control plan.
- (b) **Content of the Control Plan for Land Disturbing Activities Covering More Than One Acre.** The erosion and sediment control plan shall address pollution caused by soil erosion and sedimentation during construction and up to final stabilization of the site.
 - (1) The erosion and sediment control plan shall include, at a minimum, the following items:
 - a. The name(s) and address(es) of the owner or developer of the site, and of any consulting firm retained by the applicant, together with the name of the applicant's principal contact at such firm. The application shall also include start and end dates for construction.
 - b. Description of the site and the nature of the construction activity, including representation of the limits of land disturbance on a United States Geological Service 7.5 minute series topographic map.
 - c. A sequence of construction of the development site, including stripping and clearing; rough grading; construction of utilities, infrastructure, and buildings; and final grading and landscaping. Sequencing shall identify the expected date on which clearing will begin, the estimated duration of exposure of cleared areas, areas of clearing, installation of temporary erosion and sediment control measures, and establishment of permanent vegetation.
 - d. Estimates of the total area of the site and the total area of the site that is expected to be disturbed by construction activities.
 - e. Estimates, including calculations, if any, of the runoff coefficient of the site before and after construction activities are completed.

- f. Calculations to show the expected percent reduction in the average annual sediment load carried in runoff as compared to no sediment or erosion controls.
 - g. Existing data describing the surface soil as well as subsoils.
 - h. Depth to groundwater, as indicated by Natural Resources Conservation Service soil information where available.
 - i. Name of the immediate named receiving water from the United States Geological Service 7.5 minute series topographic maps.
- (2) The erosion and sediment control plan shall include a site map. The site map shall include the following items and shall be at a scale not greater than 100 feet per inch and at a contour interval not to exceed five feet.
- a. Existing topography, vegetative cover, natural and engineered drainage systems, roads and surface waters. Lakes, streams, wetlands, channels, ditches and other watercourses on and immediately adjacent to the site shall be shown. Any identified 100-year flood plains, flood fringes and floodways shall also be shown.
 - b. Boundaries of the construction site.
 - c. Drainage patterns and approximate slopes anticipated after major grading activities.
 - d. Areas of soil disturbance.
 - e. Location of major structural and non-structural controls identified in the plan.
 - f. Location of areas where stabilization practices will be employed.
 - g. Areas which will be vegetated following construction.
 - h. Areal extent of wetland acreage on the site and locations where storm water is discharged to a surface water or wetland.
 - i. Locations of all surface waters and wetlands within one mile of the construction site.
 - j. An alphanumeric or equivalent grid overlying the entire construction site map.
- (3) Each erosion and sediment control plan shall include a description of appropriate controls and measures that will be performed at the site to prevent pollutants from reaching waters of the state. The plan shall clearly describe the appropriate control measures for each major activity and the timing during the construction process that the measures will be implemented. The description of erosion controls shall include, when appropriate, the following minimum requirements:
- a. Description of interim and permanent stabilization practices, including a practice implementation schedule. Site plans shall ensure that existing vegetation is preserved where attainable and that disturbed portions of the site are stabilized.
 - b. Description of structural practices to divert flow away from exposed soils, store flows or otherwise limit runoff and the discharge of pollutants from

the site. Unless otherwise specifically approved in writing by the City of Cedarburg, structural measures shall be installed on upland soils.

- c. Management of overland flow at all sites, unless otherwise controlled by outfall controls.
 - d. Trapping of sediment in channelized flow.
 - e. Staging construction to limit bare areas subject to erosion.
 - f. Protection of downslope drainage inlets where they occur.
 - g. Minimization of tracking at all sites.
 - h. Clean up of off-site sediment deposits.
 - i. Proper disposal of building and waste materials at all sites.
 - j. Stabilization of drainage ways.
 - k. Control of soil erosion from dirt stockpiles.
 - l. Installation of permanent stabilization practices as soon as possible after final grading.
 - m. Minimization of dust to the maximum extent practicable.
- (4) The erosion and sediment control plan shall require that velocity dissipation devices be placed at discharge locations and along the length of any outfall channel, as necessary, to provide a non-erosive flow from the structure to a water course so that the natural physical and biological characteristics and functions are maintained and protected.

SEC. 15-2-9 INSPECTION.

The City Inspector shall inspect construction sites at least once a month during the period starting March 1 and ending October 31 and at least two (2) times during the period starting November 1 and ending February 28 to ensure compliance with the control plan.

If land disturbing or land development activities are being carried out without a permit, the City Inspector shall enter the land pursuant to the provisions of Sections 66.122 and 66.123, Wis. Stats.

SEC. 15-2-10 ENFORCEMENT.

- (a) The City Inspector may post a stop-work order if:
 - (1) Any land disturbing or land developing activity regulated under this Chapter is being undertaken without a permit;
 - (2) The control plan is not being implemented in a good faith manner; or
 - (3) The conditions of the permit are not being met.
- (b) If the permittee does not cease the activity or comply with the control plan or permit conditions within forty-eight (48) hours, the City Inspector or his designee may revoke the permit.
- (c) If the landowner or land user where no permit has been issued does not cease the activity within twenty-four (24) hours, the City Inspector or his designee may request the City Attorney to obtain a cease and desist order.
- (d) The City Inspector or his designee or the Board of Appeals upon appeal may retract the stop-work order or the revocation.
- (e) Ten (10) days after posting a stop-work order, the City Inspector or his designee may issue a notice of intent to the permittee or landowner or land user of the City Inspector's or his designee's intent to perform work necessary to comply with this Chapter. The City Inspector or his designee may go on the land and commence the work after fourteen (14) days from issuing the notice of intent. The costs of the work performed by the City Inspector or his designee, plus interest at the rate of twelve percent (12%) per annum shall be billed to the permittee or the landowner. In the event a permittee or landowner fails to pay the amount due, the City Clerk shall enter the amount due on the tax rolls and collect as a special assessment against the property pursuant to Section 66.60(16), Wis. Stats.
- (f) Any person violating any of the provisions of this ordinance shall be subject to a forfeiture of not less than \$35 nor more than \$200 and the costs of prosecution for each violation. Each day a violation exists shall constitute a separate offense.
- (f) Compliance with the provisions of this Chapter may also be enforced by injunction.

SEC. 15-2-11 APPEALS.

- (a) **Board of Appeals.** The Board of Appeals created pursuant to the City's zoning ordinance pursuant to Section 62.23(7)(e) and 68.11, Wis. Stats.:
 - (1) Shall hear and decide appeals where it is alleged that there is error in any order, decision or determination made by the City Inspector in administering this ordinance;
 - (2) Upon appeal, may authorize variances from the provisions of this ordinance which are not contrary to the public interest and where owing to special conditions a literal enforcement of the provisions of the ordinance will result in unnecessary hardship; and

(3) Shall use the rules, procedures, duties and powers authorized by statute in hearing and deciding appeals and authorizing variances.

(b) **Who May Appeal.** Any applicant, permittee, landowner or land user may appeal any order, decision or determination made by the City Inspector or his designee in administering this ordinance.

